

LISTING OF CLAIMS

Please cancel claims 1-77 and insert new claims 78-97 therefor.

78. An analog of bacteriocidal peptide microcin J25 (MccJ25) that (1) has an amino acid sequence that differs from that of MccJ25 in terms of at least one amino acid substitution, insertion, or deletion; and (2) that binds a bacterial RNAP and inhibits an activity of bacterial RNAP with a potency at least equal to that of MccJ25.

79. An analog according to claim 78 selected from the group consisting of [Lys₅]MccJ25, [Lys₁₃]MccJ25, [Lys₁₅]MccJ25, and [Lys₁₇]MccJ25.

80. An analog according to claim 78 selected from the group consisting of [X-Lys₅]MccJ25, [X-Lys₁₃]MccJ25, [X-Lys₁₅]MccJ25, and [X-Lys₁₇]MccJ25, where X contains a detectable group.

81. An analog according to claim 80 where the detectable group is selected from the group consisting of a chromophore, fluorophore and Cy3.

82. An analog according to claim 78 that also contains a detectable group.

83. An analog according to claim 82 where the detectable group is selected from the group consisting of a chromophore, fluorophore and Cy3.

84. A method for identifying an agent that binds to a bacterial RNAP homologous secondary channel amino acid sequence in a first entity, comprising the steps of: (a) preparing a reaction solution including the agent to be tested and a first entity including a bacterial RNAP homologous secondary channel amino acid sequence; and (b) detecting at least one of the presence, extent, concentration-dependence, or kinetics of binding of the agent to the bacterial RNAP homologous secondary channel amino acid sequence.

85. The method of claim 84 wherein the first entity is an intact bacterial RNAP or a fragment thereof.

86. The method of claim 84 wherein the first entity is a derivative of *Escherichia coli* RNAP or a derivative of *Bacillus subtilis* RNAP.

87. The method of claim 84 further comprising comparison of: (a) the binding of the agent to the first entity; and (b) the binding of the agent to a second entity that contains a derivative of a bacterial RNAP homologous secondary channel amino acid having at least one substitution, insertion, or deletion.

88. The method of claim 87 wherein the second entity is a derivative of an intact bacterial RNAP or a fragment thereof.

89. The method of claim 87 wherein the first entity is a derivative of *Escherichia coli* RNAP or a derivative of *Bacillus subtilis* RNAP.

90. The method of claim 87 further comprising comparison of: (a) at least one of the presence, extent, concentration-dependence, or kinetics of binding of the agent to the first entity; and (b) at least one of the presence, extent, concentration-dependence, or kinetics of binding of the agent to a eukaryotic RNAP derivative.

91. The method of claim 90 wherein the eukaryotic RNAP derivative is selected from the group consisting of a human RNAP derivative and a human RNAP II derivative.

92. The method of claim 90 further comprising comparison of: (a) at least one of the presence, extent, concentration-dependence, or kinetics of binding of the agent to the first entity; and (b) at least one of the presence, extent, concentration-dependence, or kinetics of binding of MccJ25 to the first entity.

93. A method for identifying an agent that inhibits an activity of a bacterial RNAP by binding to a bacterial RNAP homologous secondary channel amino acid sequence, comprising: (a) preparing a reaction solution comprising the agent to be tested and a first entity containing a bacterial RNAP homologous secondary channel amino acid sequence; and (b) detecting the at least one of the presence, extent, concentration-dependence, or kinetics of inhibition of an activity of said first entity, wherein inhibition involves binding of the agent to the homologous bacterial RNAP secondary channel amino acid sequence.

94. The method of claim 93 wherein the first entity is an intact bacterial RNAP or fragment thereof.

95. The method of claim 93 wherein the first entity is a derivative of *Escherichia coli* RNAP or a derivative *Bacillus subtilis* RNAP.

96. The method of claim 93 wherein the activity is selected from the group consisting of RNA synthesis, NTP uptake, pyrophosphate release, abortive-RNA release, edited-RNA release, transcriptional pausing transcriptional arrest, and Gre-factor binding.

97. The method of claim 93 further comprising comparison of: (a) at least one of the presence, extent, concentration-dependence, or kinetics of the inhibition by the agent of an activity of the first entity; and (b) at least one of the presence, extent,

concentration-dependence, or kinetics of the inhibition by the agent of an activity of a second entity that contains a derivative of a bacterial RNAP homologous secondary channel amino acid having at least one substitution, insertion, or deletion.